

REMARKS

The present response is to the Office Action mailed in the above-referenced case on February 12, 2003. Claims 1-42 are pending for examination.

The Examiner has maintained the rejection of claims 7, 21 and 35 under 35 U.S.C. 112, first paragraph, and has also maintained the rejection of claims 1-3, 5-6, and 8-12 under 35 U.S.C. 102(b) over Nemirovsky, and the rejection of claims 4, 13-14, 27, 32-33 and 41-42 under 35 U.S.C. 103(a) over Nemirovsky et al.

Applicant has again carefully studied the prior art of Nemirovsky, and the Examiner's rejections and statements in the instant Office Action. In response, applicant herein amends the base claims to more particularly point out and distinctly claim the subject matter of applicant's invention regarded as patentable, and to distinguish unarguably over the references as cited and applied by the Examiner. Applicant points out and argues the key limitations in the base claims as amended that the Examiner still appears to misunderstand in his rejections and statements.

Regarding the Examiner's 112 rejection of applicant's claims 7, 21, and 35, the Examiner stated that the claims contain subject matter which was not adequately described in the specification, and that applicant has merely supplied a suggestion to do. In the previous response applicant respectfully pointed out to the Examiner that conditional and dynamic mapping, as recited in the claims, is but one of several possible mechanisms used for processing external interrupts once an external interrupt has been detected. The interrupt logic receives the interrupt and decides which stream or streams to interrupt depending on the type of interrupt and on one or any combination of said mechanisms.

Applicant is perplexed by the Examiner's insistence that further detail be given for conditional and dynamic mapping, which is but one of several such

known mechanisms described in applicant's specification. For example, static mapping of interrupts, and programmable mapping of interrupts and exceptions are two other well-known mapping mechanisms which are described in applicant's specification, and are also recited in applicant's claims. Applicant is confused, however, by the fact that the Examiner has not chosen to require further elaborate enabling detail for these additional known mechanisms. Applicant argues that mapping is described in detail in applicant's specification. New wording by amendment herein should also render this topic moot..

Regarding the Examiner's merit rejections of applicant's claims, applicant provided argument in the previous response that Nemirovsky clearly does not teach, suggest or claim wherein through the interrupt logic specific interrupts or exceptions are detected and mapped to one or more specific streams, as recited in applicant's base claims, and that assigning two of the four streams to interrupts, as talking Nemirovsky clearly cannot read on applicant's specific recitations in the base claims.

The Examiner kindly responds in the instant Office Action, stating that in the reference two or more streams are reserved for handling interrupts, as the system has more than two interrupts, the teaching of Nemirovsky would require that each specific interrupts be mapped (assigned) to the two streams reserved for interrupts. In order to more particularly point out and distinctly claim the subject matter of applicant's invention regarded as patentable, applicant herein amends the language of the base claims to specifically recite that specific interrupts or exceptions are detected and at the time of their detection a specific stream is directed to process the specific interrupt or exception. Applicant reproduces claim 1 as amended below.

Applicant's claim 1 as amended now recites:

- 1. (Currently Amended) A multi-streaming processor system comprising:
a plurality of streams for streaming one or more instruction threads;*

a set of functional resources for processing instructions from streams; and interrupt logic;

wherein through the interrupt logic specific interrupts or exceptions are detected and at the time of their detection a specific stream is directed to process the specific interrupt or exception.

Applicant's claims 15 and 29 recite a method for processing interrupts in a multi-stream processor and a computer system for practicing the invention in accordance with applicant's claim 1, and are herein similarly amended in the present response. Applicant believes detection of interrupts or exceptions, and directing a specific stream or streams to process specific detected interrupts or exceptions, at the time of detection, is a key and important limitation of applicant's invention deserving patentable weight. As described in applicant's specification, in one aspect of applicant's invention, an active stream may pass off exception processing to another stream. In this process the stream encountering an exception interrupts the stream mapped for exception processing and waits until the exception-processing stream finishes before continuing with its own processing. This unique capability is especially important for real-time systems so the overhead of changing contexts may be avoided.

Applicant wishes to make abundantly clear to the Examiner that the teachings of Nemirovsky cannot read on applicant's claims as amended, because Nemirovsky teaches assigning two out of four streams concurrently to interrupts, and teaches away from directing a specific stream to process a specific interrupt or exception, at the time that the specific interrupt or exception is detected, as is now recited in applicant's base claims as amended. Nemirovsky clearly teaches an alternative system and method which accomplishes a similar but different purpose than applicant's invention, and clearly fails to anticipate all of the specific limitations of applicant's claims as amended.

The key limitations in applicant's claims as amended clearly distinguish applicant's invention over Nemirovsky. Applicant therefore believes that

independent claims 1, 15 and 29 as amended are now clearly and unarguably patentable over Nemirovsky. Depending claims to 2-14, 16-28 and 30-42 are then patentable on their own merits, or at least as depended from a patentable claim.

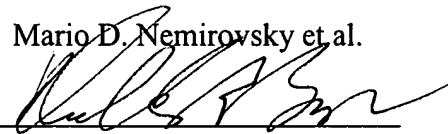
The Examiner has rejected claims 4, 13-14, 18, 27-28, 32 and 41-42 as being unpatentable over Nemirovsky as applied to claims 1-3, 5-6, 8-12, 15-17, 19-20, 22-26, 29-31, and 36-40, and further in view of Nemirovsky et al. In view of applicant's amendments to the base claims and further argument presented above on behalf of the amended claims, the above depending claims are patentable on their own merits, or at least as depended from a patentable claim, as Nemirovsky now clearly and unarguably fails to anticipate all of the specific limitations of applicant base claims as amended and argued above.

As all of the claims standing for examination as amended have been shown to be patentable over the art of record, applicant respectfully requests reconsideration and that the present case be passed quickly to issue. If there are any time extensions needed beyond any extension specifically requested with this amendment, such extension of time is hereby requested. If there are any fees due beyond any fees paid with this amendment, authorization is given to deduct such fees from deposit account 50-0534.

Respectfully Submitted

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by



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